4.3.1.10 Waste Management

This section summarizes the waste management impacts for the construction and operation of a pit disassembly/conversion facility. There is no spent nuclear fuel or HLW associated with the operation of the pit disassembly/conversion facility. Table 4.3.1.10–1 provides the estimated operational waste volumes projected to be generated at the sites analyzed as a result of the pit disassembly/conversion facility. Facilities that would support the pit disassembly/conversion facility would treat and package all waste generated into forms that would enable long-term storage and/or disposal in accordance with the regulatory requirements of RCRA, and other applicable statutes. Depending in part on decisions in waste-type-specific RODs for the Waste Management PEIS, wastes could be treated, and depending on the type of waste, disposed of onsite or at regionalized or centralized DOE sites. For the purposes of analyses only, this PEIS assumes that TRU and mixed TRU waste would be treated onsite to the current planning-basis WIPP WAC, and shipped to WIPP for disposal. This PEIS also assumes that LLW, mixed LLW, hazardous and nonhazardous wastes would be treated and disposed of in accordance with current site practice. The incremental waste volumes generated from the pit disassembly/conversion facility and the resultant waste effluent used for the waste impact analysis can be found in Section E.3.2.1. A detailed description of the waste management activities that would be required to support the pit disassembly/conversion facility can also be found in Section E.3.2.1.

Construction and operation of a pit disassembly/conversion facility would impact existing waste management activities at each of the sites analyzed, increasing the generation of TRU, low-level, mixed, hazardous, and nonhazardous wastes. Waste generated during construction would consist of wastewater, and solid nonhazardous and hazardous wastes. The nonhazardous waste would be disposed of as part of the construction project by the contractor, and the hazardous wastes would be shipped to commercial RCRA-permitted treatment and disposal facilities. No soil contaminated with hazardous or radioactive constituents is expected to be generated during construction. However, if any are generated, it would be managed in accordance with site practice, and all applicable Federal and State regulations.

Approximately 67 m^3 (88 yd^3) of TRU waste consisting of retired gloveboxes, contaminated wipes and rags, plastics, packaging materials, declassified components, and glovebox sweepings would require treatment and repackaging to meet the current planning-basis WIPP WAC or alternative treatment level. Hanford, INEL, and SRS have existing and planned TRU waste facilities that could be utilized. ORNL has the only existing or planned capability at ORR to handle TRU waste. ORNL existing and planned TRU waste facilities could handle this increase. Due to their limited capability to process, package, and store TRU waste, a radwaste facility would need to be constructed as part of the pit disassembly/conversion facility if sited at Pantex or NTS. A small quantity (4 m^3 [6 yd^3]) of mixed TRU waste would require treatment and packaging to meet the current planning-basis WIPP WAC or alternative treatment level. Mixed TRU waste would be principally leaded rubber gloves. To transport the TRU and mixed TRU waste to WIPP (depending on decisions made in the ROD associated with the supplemental EIS for the proposed continued phased development of WIPP for disposal of TRU waste), eight truck shipments per year or, if applicable, four regular train shipments per year or one dedicated train shipment per year, would be required.

All of the sites analyzed have existing or planned facilities that could manage the small quantities of LLW. Approximately 102 m^3 (133 yd^3) of LLW from paper and surgeon's gloves, which are discarded inside the Radioactive Materials Area but external to gloveboxes, and solidified liquid LLW would require disposal. Using the land usage factors from Section E.1.4, the area required for LLW disposal would be 0.03 ha/yr (0.08 acre/yr) at Hanford and ORR, 0.02 ha/yr (0.04 acre/yr) at NTS and INEL, and 0.01 ha/yr (0.03 acre/yr) at SRS. With no onsite LLW disposal capability, Pantex would require six additional LLW shipments per year to NTS. The ultimate disposal of LLW will be in accordance with the ROD(s) from the Waste Management PEIS.

A small quantity (0.4 m^3 [100 gal]) of liquid and (1.7 m^3 [2.2 yd^3]) of solid mixed LLW consisting of solvents, lead, and vacuum pump oil that have been contaminated with radioactive constituents would require treatment to meet the land disposal restrictions of RCRA. Mixed LLW would be managed in accordance with the Tri-Party

Table 4.3.1.10–1. Estimated Annual Generated Waste Volumes for the Pit Disassembly/Conversion Facility[a]

Category	New Facility (m^3)	Hanford No Action (m^3)	NTS No Action (m^3)	INEL No Action (m^3)	Pantex No Action (m^3)	ORR No Action (m^3)	SRS No Action (m^3)
Transuranic							
Liquid	0	None	None	None	None	None	None
Solid	67	271	None	3.5	None	119	338
Mixed Transuranic							
Liquid	0	None	None	None	None	None	None
Solid	4	98	None	Included in TRU	None	None	Included in TRU
Low-Level							
Liquid	4[b]	None	Dependent on restoration activities	None	8	2,970	74,000
Solid	102	3,390	15,000	7,200	32	7,320	16,400
Mixed Low-Level							
Liquid	0.4	3,760	None	4	4	87,600	1,330
Solid	1.7	1,505	50	170	46	432	7,700
Hazardous							
Liquid	2	Included in solid	Included in solid	Included in solid	2	6,460	1,260
Solid	0.7	560	212	1,200	31	26	15,100
Nonhazardous (Sanitary)							
Liquid	85,200	414,000	Not reported separately, included in solid	Not reported separately, included in solid	141,000	550,000	703,000
Solid	100	5,107	2,120	52,000	339	53,100	61,200
Nonhazardous (Other)							
Liquid	Included in sanitary	Included in sanitary	Included in sanitary	None	Included in sanitary	650,000	Included in sanitary
Solid	3[c]	Included in sanitary	76,500	Included in sanitary	Included in sanitary	321	Included in sanitary

[a] The No Action volumes are from Tables 4.2.1.10–1, 4.2.2.10–1, 4.2.3.10–1, 4.2.4.10–1, 4.2.5.10–1, and 4.2.6.10–1. Incremental waste generation volumes for pit disassembly/conversion are from Table E.3.2.1–1. Waste effluent volumes (that is, after treatment and volume reduction) which are used in the narrative description of the impacts are also provided in Table E.3.2.1–1.

[b] Liquid LLW would be treated and solidified prior to disposal.

[c] Recyclable wastes.

Agreement for Hanford or the respective site treatment plan that was developed to comply with the *Federal Facility Compliance Act* for the remainder of the sites analyzed.

Liquid hazardous waste would consist of cleaning solvents, vacuum pump oils, film processing fluids, hydraulic fluids from mechanical equipment, antifreeze solutions, and paint. Liquid hazardous waste would be treated onsite or collected in DOT-approved containers and shipped offsite to RCRA-permitted treatment facilities. After treatment, the waste would be disposed of offsite in commercial RCRA-permitted disposal facilities. Solid hazardous waste would consist of lead packing and wipes contaminated with oils, lubricants, and cleaning solvents. After compaction, solid hazardous waste would be packaged in DOT-approved containers, treated onsite or offsite, and shipped to RCRA-permitted treatment and disposal facilities. All the sites analyzed would have adequate capacity to stage the 2 m^3 (500 gal) of liquid and 0.7 m^3 (0.9 yd^3) of solid hazardous waste until sufficient quantity accumulated to warrant shipment to a RCRA-permitted treatment and disposal facility.

Approximately 85,200 m^3 (22,500,000 gal) of liquid nonhazardous sanitary and industrial wastewater, steam plant blowdown, and estimated stormwater runoff would require treatment, in accordance with site practice and discharge permits. Construction of sanitary, utility, and process wastewater treatment systems may be required. The 100 m^3 (131 yd^3) of solid nonhazardous waste such as paper, glass, discarded office material, and cafeteria waste that is not recycled or salvageable would be shipped to an onsite or offsite landfill in accordance with site-specific practice.